

**PHYTOCHEMICAL SCREENING AND ANTIBACTERIAL
ACTIVITY OF *Piper sarmentosum* STEMS**

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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENT	iii
TABLE OF CONTENTS	iv
LIST OF TABLES	vi
LIST OF FIGURES	vii
LIST OF ABBREVIATIONS	ix
ABSTRACT	x
ABSTRAK	xi
CHAPTER 1 INTRODUCTION	
1.1 Background of study	1
1.2 Problem statements	4
1.3 Significant of study	5
1.4 Objective of Study	6
CHAPTER 2 LITERATURE REVIEW	
2.1 Herbal medicine	7
2.2 The role of herbal medicine	7
2.2.1 Traditional Chinese Medicine	8
2.2.2 Japanese Traditional Medicine	8
2.2.3 Indian Traditional Medicine	9
2.3 The classification of <i>Piper sarmentosum</i>	9
2.4 The beneficial of <i>Piper sarmentosum</i>	10
2.5 The chemical constituent of <i>Piper sarmentosum</i>	14
2.6 Pharmacological Effect of <i>Piper sarmentosum</i>	22
CHAPTER 3 METHODOLOGY	
3.1 Materials	24
3.1.1 Raw Materials	24
3.1.2 Chemicals	24
3.2 Apparatus	24
3.3 Soxhlet Extraction	25
3.4 Thin Layer Chromatography (TLC) Analysis	27
3.5 Phytochemical Screening on the crude extract of the sample	28
3.5.1 Test for alkaloid	28
3.5.2 Test for phenol	28
3.5.3 Test for flavonoid	28
3.5.4 Test for terpenoid (Salkowski test)	28
3.5.5 Test for tannins	29

3.5.6	Test for phlobatannins	29
3.5.7	Test for saponins	29
3.6	Antibacterial Assay	
3.6.1	Sample Preparation	29
3.6.2	Disc Diffusion Method	29
3.6.3	Control Test	30
CHAPTER 4 RESULTS AND DISCUSSION		
4.1	Extraction of sample	31
4.2	Solvent effect on extract yield	32
4.3	Thin Layer Chromatography (TLC) of <i>Piper sarmentosum</i>	33
4.4	Phytochemical Screening of P. sarmentosum	37
4.5	Antibacterial Activity of Piper sarmentosum extracts	42
CHAPTER 5 CONCLUSION AND RECOMMENDATION		
5.1	Conclusion	46
5.2	Recommendation	47
CITED REFERENCES		48
APPENDICES		51
CURRICULUM VITAE		55

ABSTRACT

PHYTOCHEMICAL SCREENING AND ANTIBACTERIAL ACTIVITY OF *Piper sarmentosum* STEMS

The objectives of this study are to extract *P. sarmentosum* stems using soxhlet extraction technique, to perform the chemical and biological activities of *P. sarmentosum* stems, to determine the TLC profiling of the extracts sample by using thin layer chromatography method with variety of solvent system and to screen the antibacterial activity of plant crude extract using disc diffusion method. Ground *P. sarmentosum* stems were extracted using soxhlet extraction and using two different type of solvent which are chloroform and ethanol. Then each extract was evaporated using rotary evaporator to produce crude. The phytochemical screening has been performed. During phytochemical screening, phenol and alkaloid has been detected in chloroform extract meanwhile in terpenoid, saponin, flavonoid and tannins have been detected in ethanol extract. TLC profiling of the extracted sample was done using thin layer chromatography method with variety of solvent system. Antibacterial activity was tested between the *P. sarmentosum* extract against two types of Gram-positive (+) bacteria which were *S. aureus* and *B. subtilis* and another two type of Gram-negative (-) bacteria which were *S. typhymirium* and *E. coli* by using disc diffusion method. In antibacterial activity, ethanol extract showed the highest inhibition zone against *E. coli* with 11.50 mm meanwhile, chloroform extract showed the highest inhibition zone against *E. coli* with 9.00 mm as compared to other bacteria.